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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,541	01/02/2002	Chien-Jung Chen	P07486US00/MP	5597

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EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 04/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,541

Applicant(s)

CHEN, CHIEN-JUNG

Examiner

Tran N. Nguyen

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities:

On page 3, "The housing 1 has a pivot portion 11 that may be a central shaft or a bearing seat, or pivoting a rotor to rotate. The pivot portion 11 has a periphery provided with multiple wall plates 12, 13 and 14, and a pair of insertion seats 16 and 17 for insertion of a circuit board 15." This disclosure and the drawings have a discrepancy. The pivot portion is a shaft or a bearing seat. A shaft and a bearing seat does not have a periphery provided with multiple wall plates, but rather *the housing (1) has a periphery provided with multiple wall plates*.

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: *motor having removably poles with positioning structures*.

Claim Objections

Claims 1-9 are objected to because of the following formalities:

In claims 1-7, "A positioning structure for motor's pole comprising" should be changed to "*motor having removably poles with positioning structures comprising*"

In claim 1, "a housing, provided with a pivot portion having a periphery provided with multiple wall plates and a pair of insertion seats"

should be changed to "a housing having a [provided with] a pivot portion, [having] a circumferential periphery provided with multiple wall plates and a pair of insertion seats"

In claim 1, "at least one pole, including a magnetically conducting material, and an insulating material, the magnetically conducting material enclosed by the insulating material, and partially exposed outward from the insulating material, the magnetically conducting material having a positioning hole combined on the combination post of the housing, the magnetically conducting material wound with a conducting wire" is unclear because the material itself does not contain any structure, only material part or element that is configured with structure.

Therefore, the above should be changed to "at least one pole, including a magnetically conducting material part, and an insulating material part, the magnetically conducting material part enclosed by the insulating material part, and partially exposed outward from the insulating material part, the magnetically conducting material part having a positioning hole combined on the combination post of the housing, the magnetically conducting material wound with a conducting wire."

By the same token, claims 2-9, the recitations should be changed to a magnetically conducting material part, and an insulating material part.

In claim 2, "wherein the two ends of the wall plates of the housing have the same thickness, the outer ends of the two insertion seats have the same thickness, and the end of the wall plate and the adjacent outer end of the adjacent insertion seat have different thickness" is unclear which wall plates having thinner and which wall plates having thicker ends.

The above should be changed to "wherein said housing having three wall plates, a first and a second wall plates of said three wall plates respectively are configured with the two ends thereof [of the respective two wall plates of the housing] having [have] the same thickness, the outer ends of the two insertion seats have the same thickness, and the ends of [the] a third wall plate of said three wall plates and the [adjacent] outer ends of the adjacent insertion seat have different thickness with respect to the first and second wall plates" (see page 3 for detail description to support the above suggested changes).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. **Claims 7-9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, "A motor's pole structure" recite a singular pole—"A (single) motor's pole structure (written in singular form)-- claim 7 further recites "insulating material, a single conducting wire continuously wound around even numbers of magnetically conducting material". This recitation is indefinite because it is unclear that how many of "even number" of the so-call magnetically conducting material (part) there are in one single pole structure so that the wire continuously wound around thereof.

In claim 8, "the poles are arranged in alternate manner" is indefinite because first of all, as stated above, claim 7 recites one single pole not a plurality of poles; secondly, this recitation does not have support from the spec. On page 4, spec discloses, "each two adjacent poles (2) have different directions of current and magnetic field." Therefore, should it be the poles are arranged to have magnetic alternate polarities?

Corrections are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 7-9**, as understood in light of spec, are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (US6411006) in view of Lindsley (US 6137199).

Suzuki discloses motor pole structure as in the claimed invention; particularly the pole has two ends with different thickness (see figs 3A-B and 4). Suzuki, however, does not disclose the pole structure having single continuously wire wound around the poles and the poles having alternate magnetic polarities.

Lindsley, however, teaches a motor's pole structure (50) has a continuously-wound single wire being wound 25 turns around each of eleven stator poles, i.e., the wire is wound around even number of poles and odd number of poles. The direction of the turns reverses from one stator pole to the next. The reversal in pole winding is necessary because at the instant a magnet's polarity changes with respect to a given stator pole, adjacent stator poles experience the opposite change in magnetic polarity and, therefore, the current induced in one stator pole is in the opposite direction to the current induced in the adjacent stator poles. In other words, the poles are arranged to have alternate magnetic polarities. This would enhance the magnetic characteristics of the pole and reduce loss therein.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the Suzuki pole structure by embodying the poles with a continuously-wound single wire being wound around the stator poles so that the poles are arranged to have alternate magnetic polarities. Doing so would enhance the magnetic characteristics of the structure will reducing iron and thermal losses.

Allowable Subject Matter

Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 2-6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Communication

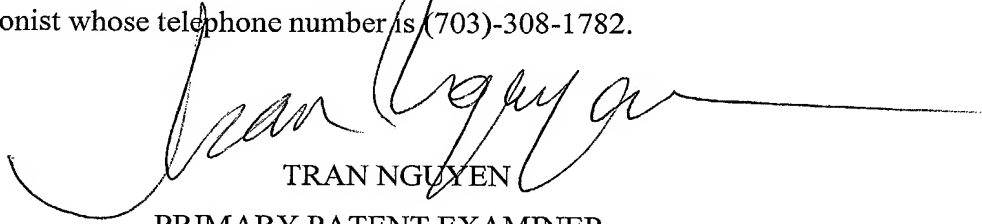
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 6:00AM-2:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-395-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

A handwritten signature in black ink, appearing to read "Tran Nguyen", is written over the printed name.

TRAN NGUYEN

PRIMARY PATENT EXAMINER

TC-2800